An Assessment for Learning Research Study

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**Abstract**

***Keywords:***

An Assessment for Learning Research Study

**Chapter One**

**Research Problem**

With the growing concern over student achievement especially on high stakes tests, it is imperative for schools to do all they can to increase the effectiveness of teacher instruction and student learning. Formative assessment is one technique which offers scaffolded learning that can greatly improve student success in every content area, however, many teachers are unsure of how to effectively utilize these strategies within there classroom (Clark, 2011). Therefore, in May of 2010, Central Dauphin East High School sent eight teachers and one administrator, all volunteers, to the Capital Area Intermediate Unit (CAIU) for the first of three workshops entitled *Embedding Formative Assessment Series* to be conducted over the following year. The eight teachers and one administrator became a professional learning community (PLC) within the school whose focus was on the proper implementation of the CAIU workshops.

Within a few months of the workshop some of the participants changed. One teacher from the original PLC was furloughed, one decided to no longer participate and one was promoted to principal. The teacher promoted to principal took over the administrator role in the PLC and one additional teacher who did not participate in the original workshop was recruited to make an even six teachers on the team. The PLC had structured meetings for an hour and a half every month where each individual created a personal action plan for the next month and reflected upon the strategies attempted during the previous month. It included regular peer observations for constructive criticism and praise of techniques tried.

Two of the stated objectives of the *Embedding Formative Assessment Series* workshops were for the members of the PLC to share their learning intentions and to participate in effective classroom discussions in order to elicit evidence of learning. Another objective was also to provide relevant feedback to students to promote growth while also encouraging student self assessment and peer assessment as ways to improve their comprehension of the content. The last objective was to use evidence of learning to adapt the current lesson being taught in order to meet the learning needs of all the students in the class.

**Significance**

The education system has not been immune to the economic crisis that has hit the United States. Therefore, it is imperative that the funds allocated by a school district for professional development and the improvement of student achievement be utilized in the best possible manner. With the PLCs participation in the three workshops held by the CAIU and their monthly hour and a half long meetings which often required other teachers to cover classes, an additional cost, and a new PLC starting this year, it would be prudent to know whether the strategies offered by this program work in the manner in which they were intended.

Since the school has formed a second formative assessment team and hopes to expand this in the future, the outcome of the formative assessment strategies would also be important to know for this reason. If the strategies do in fact aid in the comprehension of the objectives sought then the gradual incorporation of all the faculty onto formative assessment teams, the time they will require to plan lessons accordingly and meet with their PLC, would be worthwhile. Otherwise it is another strategy that can be discarded for a program with better probative results.

**Research Questions**

1. Were significant gains in achievement made in the classes taught by the PLC teachers from the year prior to the start of the PLC to the year after the formation of the PLC?
2. How were student participation and attentiveness impacted with the use of the formative assessment strategies from the purview of the teachers and students involved in the classes in which it was utilized?

**Definition of Terms**

Professional Learning Community (PLC) – Predominantly used in schools, it is employed as a way to foster collaboration between colleagues with similar disciplines or student populations in order to improve both teaching and learning (Wiliam, 2011).

**Chapter Two**

**Assessment, A Brief History**

Young and Kim (2010) discuss the general trends in educational assessment. Through research they found that around the 1980s, classroom assessment generally referred to any assessments given by a teacher that was not a district or state mandate. From the late 1980s through the mid-1990s, performance assessment became thought of as a standards-based reform, the reformers arguing that these tests would better reflect whether the students had learned the intended content. Formative assessment did not become prevalent until the late 1990s (Young & Kim, 2010).

**Teachers, Students and Assessment** **Teacher Assessment Practices**

There are a wide range of testing techniques and approaches educators utilize, from the more formalized including teacher-made summative assessments, state standardized tests and homework, to other informal, “on-the-spot” assessments such as student behavior and participation and teacher observations. The assessment practices educators use within their classroom is generally developed after they enter the teaching profession due to the lack of training provided during their college programs and often results in them struggling on how and what to assess . The way in which a teacher decides to assess then is directly related not only to their understanding of the content they teach but also their understanding the processes in which students learn (Young & Kim, 2010).

***Summative***

Due to the private and isolative nature of teaching in general, there is typically very little collaboration that takes place in creating assessments for their courses. The majority of classroom assessments are teacher-made tests and that an estimated 54 tests constructed by the classroom teacher are used per year in an average classroom, resulting in “unique assessments, yearly, worldwide. Typically, assessment done by teachers is to assign grades and often the scores given on more subjective questions are based on the teacher’s opinion of the information the student provides. It is possible factors that are not simply a students’ understanding of the material are considers such as impressions of effort (Frey & Schmitt, 2007; Young & Kim, 2010).

However, in more recent years, district administrators have to implement assessments that are aligned to the curriculum given in a timely fashion, the results of which would be used to inform instructional decisions throughout the school year. With the climate of teacher accountability, the collaboration of making and evaluating the effectiveness of common assessments can be looked upon negatively by teachers who might hesitate to share their assessment results for fear of it reflecting adversely on their instruction (Young & Kim, 2010).

***Formative***

There is great value placed on the informal information gleaned from “everyday classroom interactions” by educators in regards to the progress of their students (Young & Kim, 2010, p. 7). These everyday type exchanges done by exemplary teachers, ensures student participation in discussion and engages the students. Those teachers with excellent classroom management skills can allow for better daily informal observations of student understanding and time to hold individual or group conferences to provide appropriate feedback (Wiliam, 2011; Young & Kim, 2010).

**Teacher Views on Assessment**

There is a strain that exists for teachers, according to Steinberg (2008), between assessments internal and external benefits. Where the internal benefits are subjective and relate to student progress, being assessed by teacher observations, the external benefits are objective and pertain to marks the students receive.

***Summative***

Clark (2011) discusses a national survey of teachers conducted by Pedulla in 2003 that found 90% and 79% felt pressure to improve test scores from district administrators and principals, respectively, and a third wanted to be moved to a non-tested grade. Teachers reported insufficient training in testing and data collection over 50 years ago and that is still the case today. Seventy-five percent of teachers surveyed in 1985 were concerned about their self-made tests and the need to improve them. Thirty-three percent and 80% of educators wanted to become more proficient in analyzing the testing data in 1993 and 2007, respectively (Clark, 2011; Young & Kim, 2010).

The reason teacher’s mark student work is usually only to assign grades and not to identify misconceptions and appropriate subsequent instruction. And the folders of student work teachers keep is not for instructional analysis and modification purposes but to ensure there is a record for possible future accountability (Young & Kim, 2010).

***Formative***

Few educators fully understand the instructional implications of the scaffolded learning formative assessment offers or how their responses in its utilization should work. They also get confused between summative and formative assessment and would welcome guidance as to what is actually considered formative. However, there are teachers who consider formative assessment as outside their normal obligations as educators and that few teachers use such assessments in their instruction despite knowing the advantages they offer. When teachers have a deep knowledge of the content and formative assessment techniques, a teacher can break down the concepts into more manageable pieces, find different ways to express the pieces and then rework the instruction to better match a student’s understanding and misconceptions (Macintyre Latta, Buck & Beckenhauer, 2007; Wiliam, 2011; Young & Kim, 2007).

**Student Views on Assessment**

There is a growing disaffection among students for assessment, as discussed by Clark (2008), especially with the policies that are currently in place. Little is being done to assuage this disaffection considering that tests are continually being viewed by teachers as summative instead of utilizing their formative potential. As a consequence, students are only concerned with grades they receive on the test, not understanding the content, and will simply memorize the information to be tested, a simple retention of facts. Brown and Hirschfeld (2007) argue that students are simply “playing the summative game” in which their overall goal is to both protect their reputation and to maintain their self-worth (p. 64). However, if the tests were to emphasize analyzing, evaluating and synthesizing, student motivation to practice those skills would be increased (Clark, 2008).

According to Brown and Hirschfeld (2007), students have three major notions about assessment. First, they consider it negative in nature due to the idea that it is “unfair, bad, or interfering to learning” (p. 65). Second, it is a way to hold the students, teachers and schools accountable for their learning. And third, that some assessments, depending on format or procedure, could be advantageous, possibly even gratifying, if used to improve their learning (Brown & Hirschfeld, 2007).

**Formative Assessment**

**Origin**

Surprisingly, there is even a dispute over the origin of the word formative. Frey and Schmitt (2007) say many authors suggest that due to the nature of formative assessment techniques, in that they help to “form teacher and student behavior,” the word formative was born (pp. 410-411). In contrast, the first reason for the adoption of a new assessment term was to distinguish it from summative assessment. They contend that the use of formative came about since it takes place while the learning is still forming.

Historically, the first use of the term “formative” was by Scriven in 1967, which he paired with “evaluation” and used it as a means of contrasting this new assessment strategy with summative evaluation (Frey & Schmitt, 2007, p. 411). In 1968 it was first attached to assessment by Bloom who saw that formative assessment and mastery learning were directly related (Clark, 2011). Following this introduction by Scriven and Bloom, it became an assessment technique to be utilized during instruction with the purse of evaluating the instruction to then improve upon or alter it (Clark, 2011; Frey & Schmitt, 2007; Wiliam 2011).

Many feel that the arrival of formative assessment in America was ill-timed since it was overshadowed by the No Child Left Behind Act (NCLB) which came to the forefront in January of 2002. At this time, there was intense pressure on teachers, due to the NCLB Act, to raise test scores on state standardized tests. Whereas this new and “potentially powerful class-room-based learning and teaching innovation” might have assisted in an increase in student achievement on such tests it was seen by educators as something they could do without, yet another thing to add to their already full plate (Clark, 2011, p. 160).

At present the future of formative assessment in America is in question. This is first due to the lack of an agreed upon definition, which will be discussed later in the paper and second, those who have implemented formative assessment have not done so consistently. The last reason is that the quantitative data obtained which supports the claims that formative assessment techniques improve student achievement have been of poor quality and therefore have been disregarded (Clark, 2011).

**Definition**

There is tremendous debate over the definition, or lack thereof, of formative assessment since its flexible nature can cause inconsistencies in the adoption of formative assessment practices. Similarly, without an established definition there is no way to determine what formative assessment is actually supposed to achieve which makes measuring its effectiveness problematic since what data should be gathered and the method of gathering said data is uncertain (Bennett, 2011; Clark, 2011; Wiliam 2011).

However, there have been various individual professionals and associations that have developed their own definition of formative assessment. The Formative Assessment for Teachers and Students (FAST) organization determined that “Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students’ achievement of intended instructional outcomes” (cited in Clark, 2011, p. 165). Black and Wiliam (1998) also offer a definition in that it includes any activity done by a teacher or student from which information can be gathered and used to modify and adapt the instruction to meet the needs of the students.

Young and Kim (2010) consider formative assessment more simplistically. “On-the-fly” formative assessment is not necessarily planned by the teacher, but observations determine a need and allow for “teachable moments” during the lesson (p. 6). “Planned-for-interaction” are the formative assessment techniques that have been imbedded into the lesson prior to instruction. The teacher knows in advance where and when to place them and what they are going to be assessing (p. 6). In an article written by Kaftan, Buck & Haack (2006), formative assessment is described as a process. This process, which is used by both teachers and students, has the ultimate goal of recognizing and responding to both propensities and deficiencies of student learning during the learning itself.

**Purpose**

Formative assessment, as said by Frey and Schmitt (2007), should be utilized to obtain growth student learning (growth student learning is awkward, are you missing a word?. The most effective way for this to occur is for data to be used by students to “adjust their own learning behaviors,” and the teachers to “adjust their own teaching behaviors” (p. 415). If formative assessment is used as an assessment for learning it is much more effective than if it is simply used to assess the learning. Clark (2011) stresses the need to not consider formative assessment as something that is inert or firm and looks different in each individual classroom.

**Types of Formative Assessment**

***Assessment for Learning***

Assessment for Learning is a place where together, everyone is learning and assessment is a part of that learning. It is “a process where pupils set learning goals, share learning intentions and success criteria, and evaluate their learning through dialogue and self and peer assessment” (Clark, 2011, p. 163).

Clark (2011) breaks down an Assessment for Learning (AfL) program into various key components which stars off with the goal of students being able to clearly understand both what they are trying to learn and also what is expected of them. Therefore it is imperative that the teachers and administrators make it a point to express these to their students. Secondly, feedback must be given in a timely manner in regards to the quality of work, how the student can improve upon it and then maintain that improvement. The student should also be involved in making decisions on what they need to do next and who can assist them in order to be successful. Cultivating student self-awareness with respect to their learning capabilities and taking ownership of, and participating in, that learning (Clark, 2011; Wiliam, 2011).

An AfL program is designed in such a way as to keep students learning and being productive by keeping their confidence high. The students in this program are significantly less likely to experience a drop in motivation and an apathy for learning which will provide them with life-long benefits. However, the success of an AfL program depends largely on the teachers involved, their skill in the content and application of formative assessment techniques within their classroom and the adaptations they make when unique circumstances arise (Clark, 2008; Wiliam 2011).

***Feedback***

Feedback is a powerful instructional tool when utilized appropriately. For example, simply offering praise or punishments in conjunction with a student’s performance results in little growth in student learning or understanding whereas telling a student how to perform a task more effectively results in a significant increase in student learning and understanding. In order for feedback to make any meaningful change it must first tell the students what they are doing well and then make sure to inform them of how to improve their understanding. Feedback can be given for a wide variety of classroom activities including homework, quizzes, tests, class participation and more, however, the feedback must be presented in student-friendly terms. How can a student be expected to make any meaningful change is they do not understand the feedback that has been provided (Callingham, 2008; Clark 2011; Wiliam, 2011)?

In order for feedback to be considered formative, there are four main points Clark (2011) says must be present. The first is that the strategies, which are focused on learning for learning, are generalized and can be used for a wide variety of problems. The second refers to a support system for the learners which can guide them through their own thinking process. Thirdly, the students must be made aware of their prior performances, their current level of understanding, and the standards that are in place that define the success for which they are striving. And lastly, feedback that motivates students into owning their individual learning is formative in nature (Clark, 2011; William, 2011).

**Chapter 3**

**Purpose**

Due to the scant amount of information on the informal assessment practices of educators and the value that teachers place upon them, there is a significant “gap in research that may be worth pursuing” (Young & Kim, 2010, p. 9). With Central Dauphin East High School having incorporated fourteen faculty members into two formative assessment teams, and the hope for continual expansion, the achievement results of students in these classes is essential. Therefore, a teacher in the proposed study will determine if formative assessment practices increase student achievement. Not sure who you are referring to, if it is you should refer to yourself as the researcher. We can discuss Tuesday. Possibly say Therefore, the researcher as part of the formative assessment team will help determine if formative assessment practices increase student achievement. Again, we can discuss Tuesday.

**Study Design**

Both quantitative and qualitative measures will be used to ensure that all areas of formative assessment are being appropriately analyzed. The researcher will use class grades on common assessment and surveys of perspectives for the classes of the teachers involved.

**Procedures**

Collection of data from the grade books of every class involved will take place in the January and February months and the distribution of the questionnaires will be take place in February. All questionnaires will be completed on the same day for all participating students and teachers. Both measures will be analyzed during the month of March with the results published in April.

**Setting and Sample**

This action research study will be conducted at Central Dauphin East High School, one of two high schools in the Central Dauphin School District, the only one to have faculty members trained in formative assessment. CD East High School has a diverse student population with more than 50% minority students, 60% low socioeconomic, and a large number of special education (IEP) and English language learner (ELL) students. While the student population is around 1600, the number of students actually involved in the study, in terms of both assessment data and their perceptions, is dependent upon whether they have had or currently have a teacher who is on a formative assessment team. There will be between five and fourteen teachers involved in the study that cover multiple disciplines and grade levels.

**Instruments**

Summative test scores on common assessments in the participating classes will be analyzed with a comparison of the grades from the year prior to the use of formative assessment with the year during its implementation. Also, two specifically designed self-report questionnaires will be used to elicit both student and teacher conceptions (are you sure you want to use the word conceptions?) of the formative assessment strategies, specifically in the areas of student participation, attentiveness and perceptions on comprehension.

**Data Collection**

Data will be retrieved from the Teacher Access Center (TAC), which is the online grading program used by the Central Dauphin School District. All surveys will be completed on the same day for all participating students and teachers.

**Data Analysis**

At the end of the study the grades for each summative test from the two different school years will be compared. The majority of the qualitative questionnaire will be in multiple choice format and will be run through the school’s prosper system for data analysis. The remainder of the questionnaire will be in short answer format and will be read through and organized based on similar responses. Based on the results, a determination will be made as to the effectiveness formative assessment has on student achievement.

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